Gina Harrison
Washington

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PACIFIC TELESIS
Group Washington

May 21, 1996

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MAY 21 1996

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W. , Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: CC Docket No. 96-45, Universal Service

Today, Colin Petheram, Regulatory Manager, Universal Service, Peter W. Geiler, Financial Manager, Product Economics and Public Policy Analysis, both of Pacific Bell, James Stegeman, Senior Consultant, INDETEC International, and I met with Greg Rosston, Chief Economist, FCC; Peyton Wynns, Chief, Industry Analysis Division, Common Carrier Bureau; Jay Atkinson, Bill Sharkey, Alex Belinfante, Nasir Khilji, and Rafi Mohammed, all of the Common Carrier Bureau, to discuss the issues summarized in the attached materials. Please associate these attachments with the above-referenced docket.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's rules. Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions.

Sincerely,

cc: J. Atkinson
A. Belinfante
N. Khilji
R. Mohammed
G. Rosston
W. Sharkey
P. Wynns

021

Cost Proxy Model

Key Points Regarding Model:

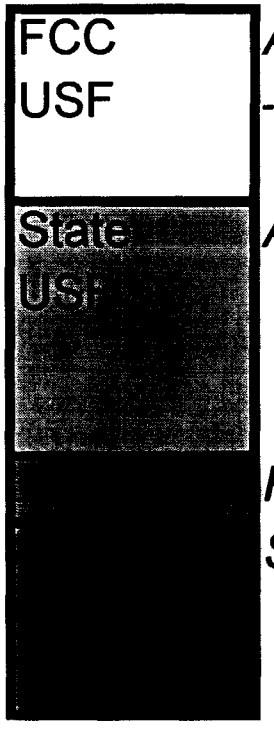
Model is Flexible:
- Can be run at a variety of geographic levels, grid, CBG, cable TV boundary, political boundary
- Demographic data is available for ethnicity, income, size of household
- Can use commercial or proprietary data
- Definition of what is Universal Service is easily modified

Cost Proxy Model is ready for Implementation:
- CPM is part of California's Universal Service proceeding
- Interim decision by CPUC in July, Final Decision - early August
- Critical evaluation of model has already been done

Model is Accurate & Reflects Reality:
- Geographic unit is small enough to capture actual location of wire centers and engineering decisions that have impacted network design
- Can have significant impact on accuracy of rural telcos numbers
- Other models have missed totally or misallocated wire centers to incorrect CBGs
- Captures clustering in rural areas, does not assume even geographic distribution
- Properly identifies investment and non-investment related expense

California Example

FCC Subsidy Issue in Context of Total Cost of Universal Service



Additional Funding, provider receives

- at the current level of $1B for current USF and $4B CCL

Additional Funding, provider receives

$ 3.50 *Federal EUCL, funded by end users*

$ 11.25 *State Price, funded by end users*

THE COST PROXY MODEL©

What is it

The CPM is a database driven predictor of a least cost, forward looking local telecommunications network. It is based upon data collected from a small geographic unit which can be roled up into an geographic area, including CBG, WC, CATV, or according to other factors such as ethnicity, income, age, etc..

Distinguishing characteristic

A SAS™ based, menu driven software system making it easy to use and run what if scenarios, contrasted to Excel™ spreadsheets based models.

Other advantages

Finer input geography - grid
Delinks cash operating expenses from investments
Includes all network elements
All inputs are changeable
Accurate assignment of of CBGs
Recognizes individual provider uniqueness
Flexible
Works with both proprietary and commercial inputs

CPM Development Criteria

1. Accommodate any geography

2. Operate with or without proprietary data

3. Reflect realistic cost drivers

1. Accommodate Any Geography

- Individual premises
- Grid cells (any size)
- Census block groups
- Cities and towns
- Wire centers
- CATV areas
- Entire state
- Arbitrary polygons

2. Operate With or Without Proprietary Data

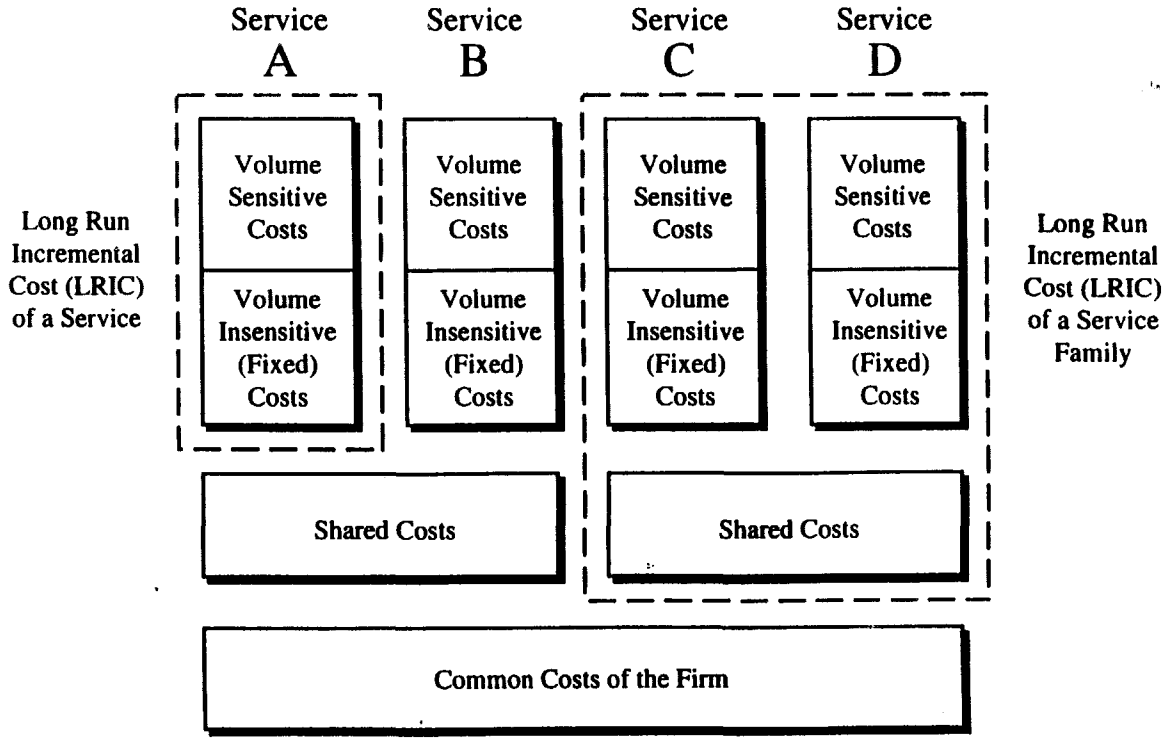
- Customer addresses
- Actual network
- Company costs
- Actual equipment
- Actual network topology

- Grid cells/other polygons
- Simulated network
- Average costs
- Assumed equipment
- Modeled network topology

3. Reflect Realistic Cost Drivers

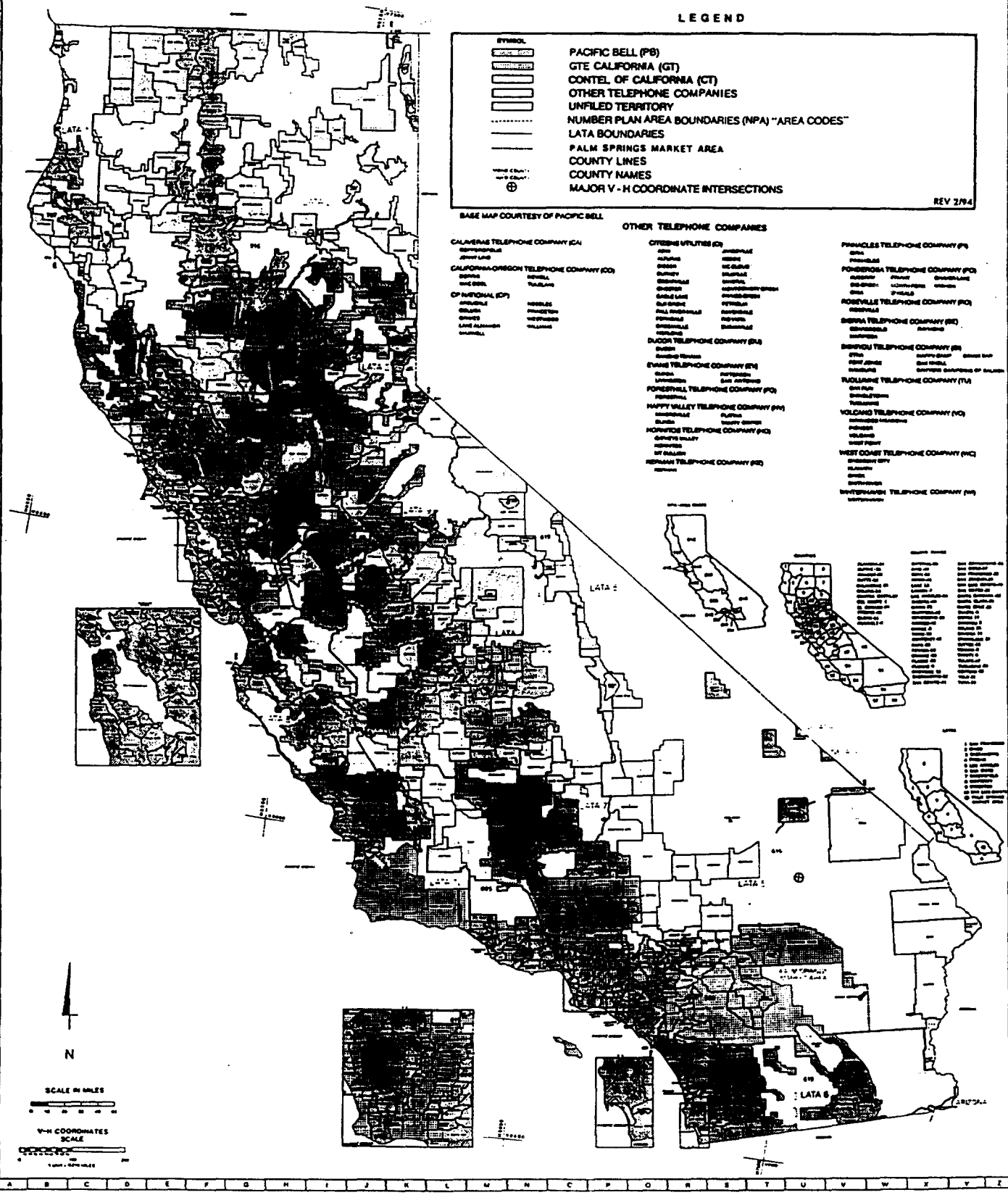
- Recognize terrain differences
- Assign Customers to serving wire center
- Accommodate specified technology
- Reflect actual distances and densities

	Forward Looking								
	Object Specific								
	Vol. Sens.	Vol. Insens.	Shared #1	Shared #2	Shared #3	Common Cost	Total Direct	Historical Cost[1]	Total Cost
A	16	5	X		X	X	21	X	
B	80	150	X			X	230	X	
C	50	240		X		X	290	X	
D	85	45		X	X	X	130	X	
Totals	**231**	**440**	**40**	**5**	**20**	**10**	**671**	**20**	**766**

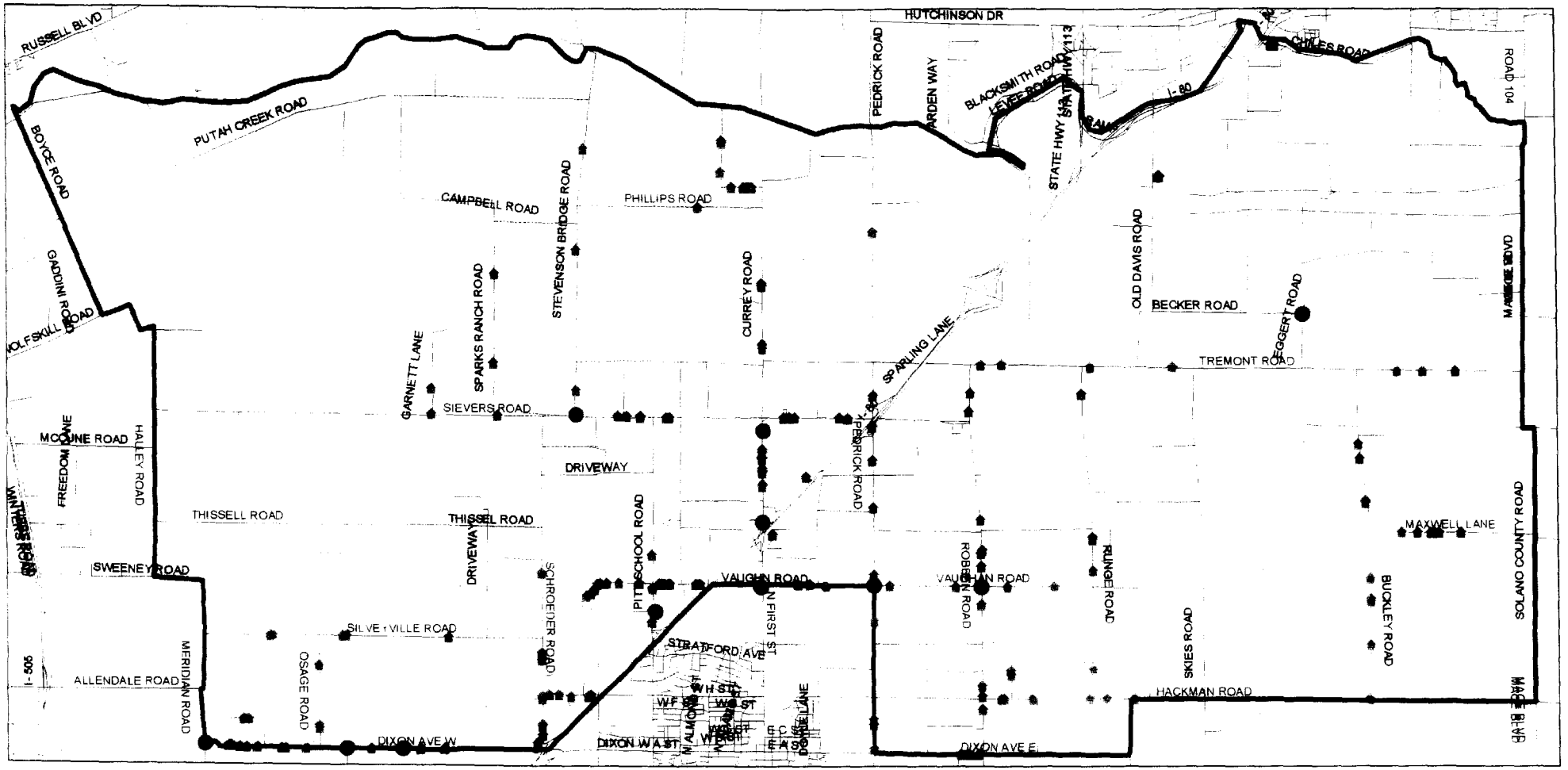


TELEPHONE EXCHANGE AREAS

CALIFORNIA PUBLIC UTILITIES COMMISSION



BLOCK GROUP 60952533.982
DIXON AREA

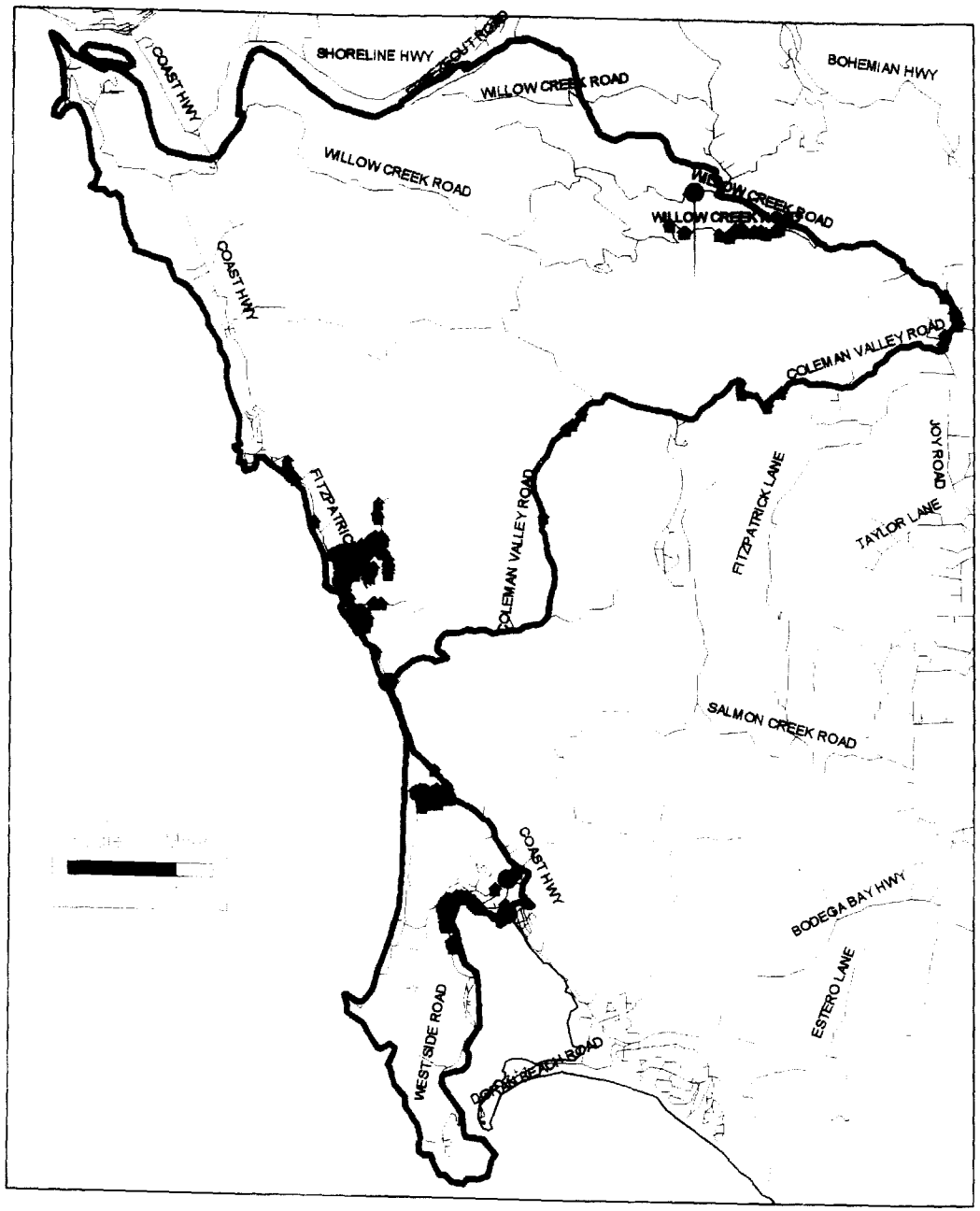


Scale in Miles

HOUSEHOLDS
SAI'S
BG 2533.982
ROADS

DIXN6 012496D

PREPARED BY PACIFIC BELL
GEOGRAPHIC INTELLIGENCE SERVICES
BUS MKT GRP

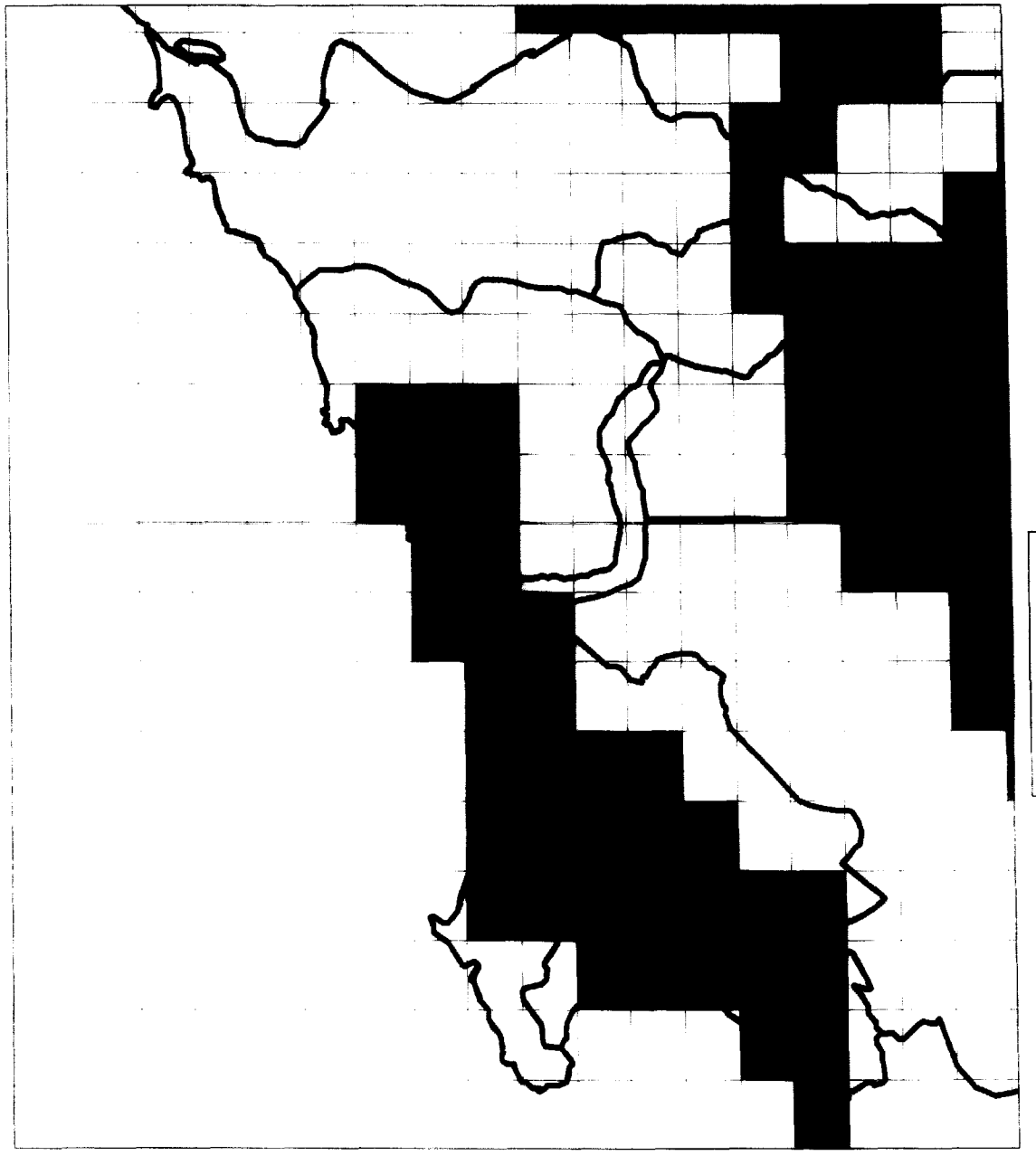


BLOCK GROUP 60971543.004
BODEGA BAY AREA

HOUSEHOLDS
SAI'S
BG 1543.004
ROADS

BDBA7 012496D

PREPARED BY K. DOMBROWSKI (510)823-5025
GEOGRAPHIC INTELLIGENCE SERVICES - BUS MKT GRP



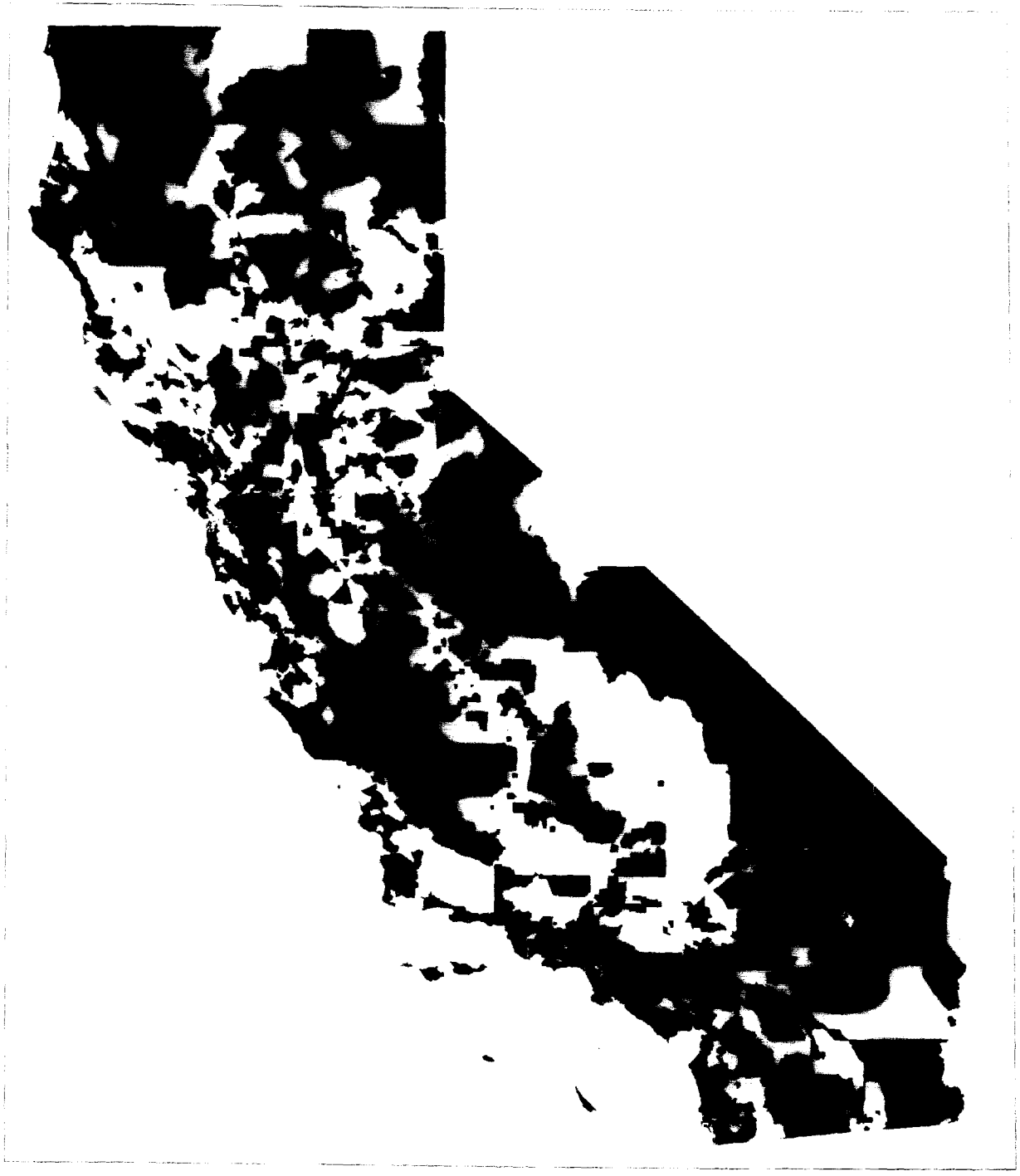
BODEGA BAY AREA
RES/BUS DENSITY
NINE GRID (AVERAGE)

0 - 10
11 - 50
51 - 150
151 - 500
501 - 2000
2001 - 5000
OVER 5000
BG 1543.004
WIRE CENTER BOUNDARY

Scale in Miles

BDBA3 012496D

PREPARED BY PACIFIC BELL
GEOGRAPHIC INTELLIGENCE SERVICES
BUS MKT GRP



UNIVERSAL SUBSIDY AMOUNTS BY CENSUS BLOCK GROUP COST PROXY MODEL CALIFORNIA

-$80.00 - $10.00
$10.01 - $25.00
$25.01 - $50.00
GREATER THAN $50.00
SUBSIDY NOT AVAILABLE

PREPARED BY PACIFIC BELL
GEOGRAPHIC INTELLIGENCE SERVICES

SUB_CA 051496D

UNIVERSAL SUBSIDY AMOUNTS BY CENSUS BLOCK GROUP
COST PROXY MODEL - SAN FRANCISCO BAY AREA

PREPARED BY PACIFIC BELL
GEOGRAPHIC INTELLIGENCE SERVICES

SUB_BA 051496D

UNIVERSAL SUBSIDY AMOUNTS BY CENSUS BLOCK GROUP
COST PROXY MODEL - LOS ANGELES AREA

PREPARED BY PACIFIC BELL
GEOGRAPHIC INTELLIGENCE SERVICES

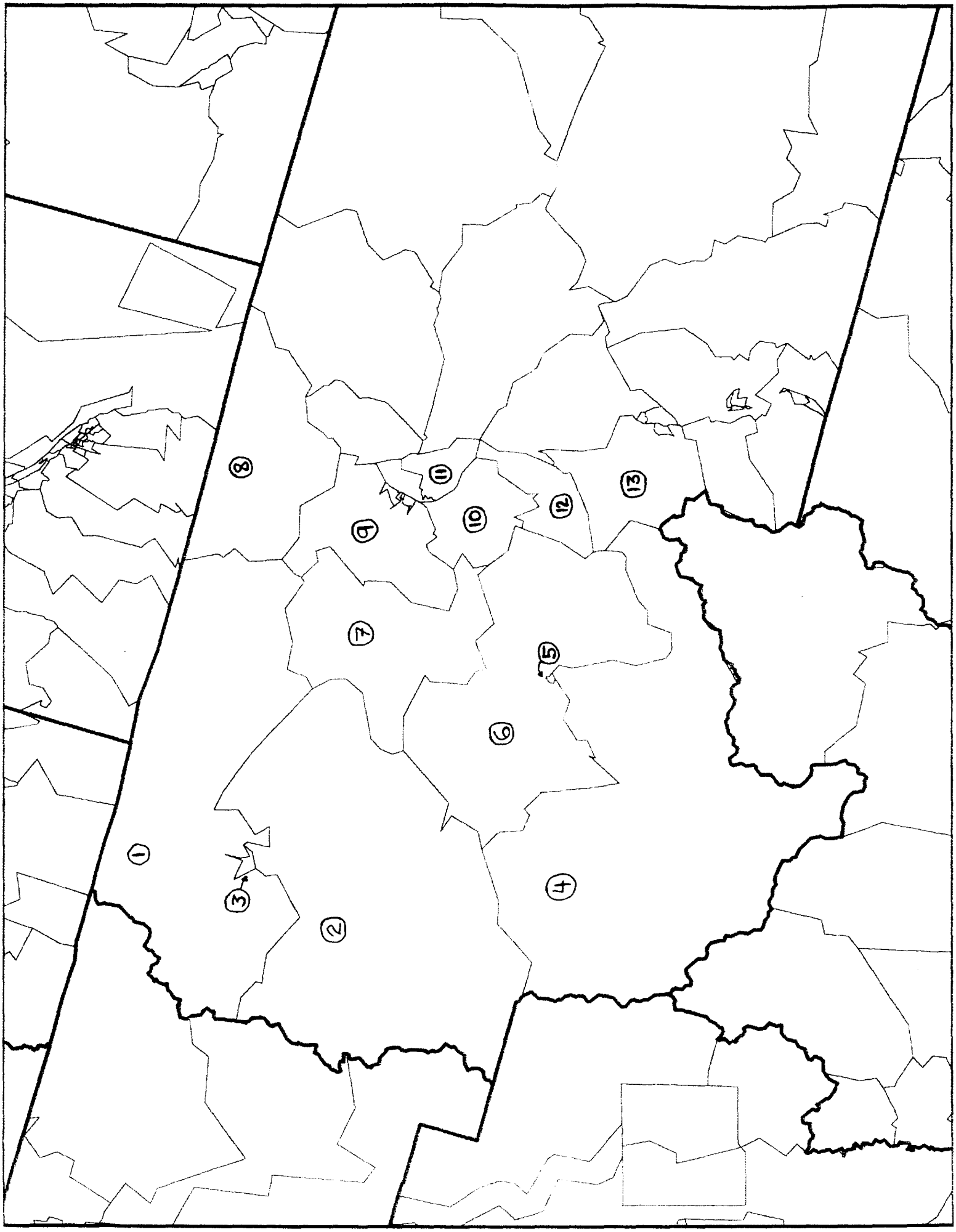
SUB_LA 051496D

CALIFORNIA
R. 95-01-020
I. 95-01-021
ALJ Wong

Exhibit 32

Introduced 5/96

SISKIYOU TELEPHONE COMPANY CBG AND EXCHANGE AREAS


1
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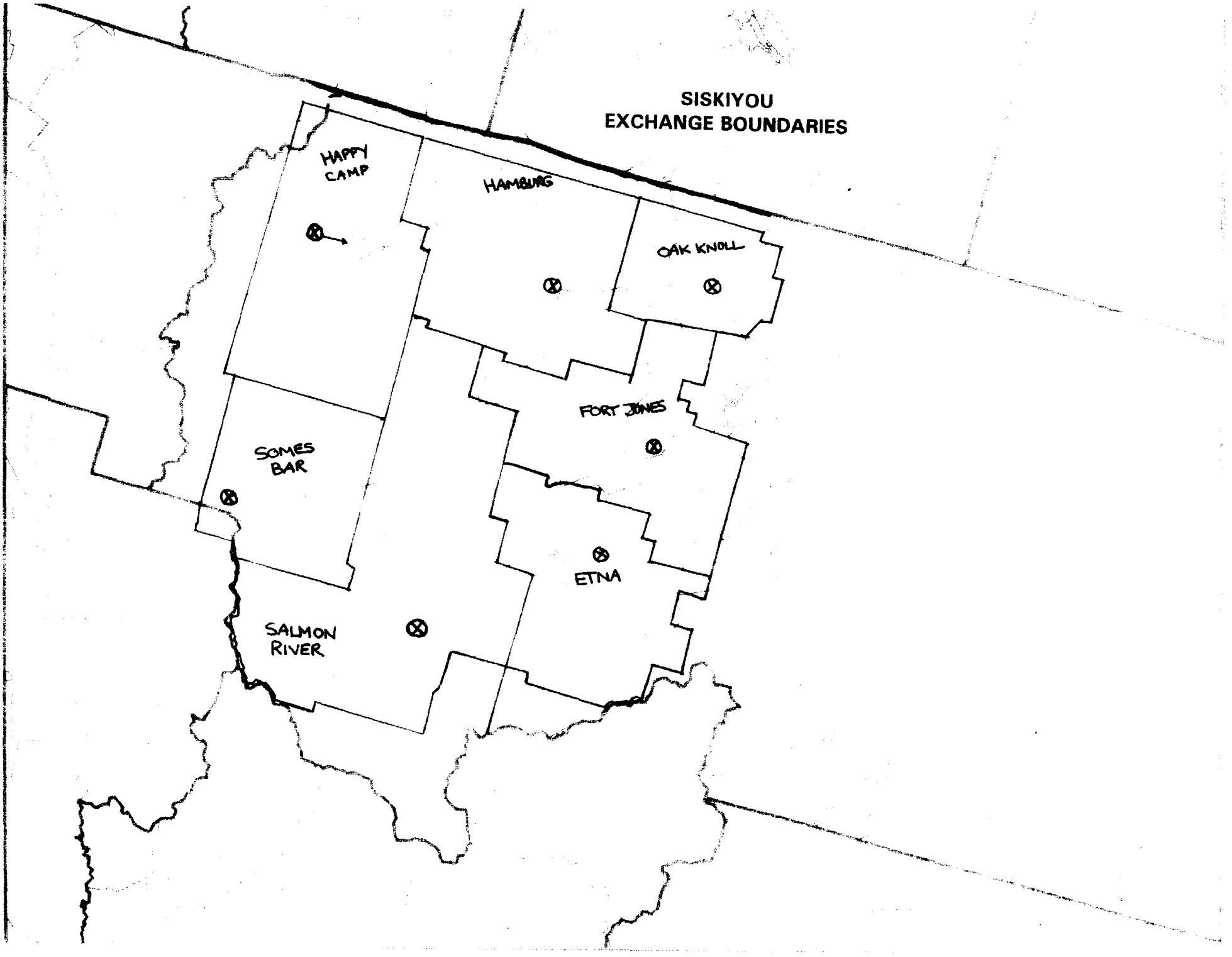

SISKIYOU
EXCHANGE BOUNDARIES
HAPPY CAMP
HAMBURG
OAK KNOLL
FORT JONES
SOMES BAR
ETNA
SALMON RIVER

CALIFORNIA
R.95-01-020
I.95-01-021
ALJ WONG

Exhibit 36
MAY 1996

location	switches required	equipped lines	EO switching, per line	wire center, per line	tdm trks required (local)	tdm trk invest per line (lcl)	OS trks required	OS trk invest per line	tdm, per line	OS tdm, per line	STP, per line	# links required	link investment per line
ETNACAXF	1	1,204	$ 293	$ 87	18	$ 6.60	2	$ 0.83	$ 7.21	$ 4.38	$ 18.02	2	$ 1.72
FT.JNCAXF	1	843	$ 300	$ 88	13	$ 6.14	2	$ 0.94	$ 7.21	$ 4.38	$ 18.02	2	$ 2.48
HCMPCAXF	1	1,380	$ 290	$ 86	21	$ 7.20	2	$ 0.98	$ 7.21	$ 4.38	$ 18.02	2	$ 1.58
SWBRCAXF	1	584	$ 304	$ 88	8	$ 5.84	1	$ 0.86	$ 7.21	$ 4.38	$ 18.02	2	$ 3.56

		FEEDER					Copper Feeder							Total	Fiber Base Data		
Office	Quadrant	Distance A	Distance B	Size A	Size Last B	#Max Cs in B	Last B Cost	Max Cs Costs	B Sgmt $	A Sgmt $	BG $ wireallow	Structure $	Cpr BG $	Size A	A $	Size B
ETNACAXF	2	0.00	16,661.13	N/A	0	0	$0	$0	$0	$0	$0	$0	$0	N/A	0.00	12
ETNACAXF	3	0.00	1,824.80	N/A	800	0	$8,230	$0	$8,230	$0	$8,230	$3,380	$12,606	N/A	0.00	0
FT.JNCAXF	2	0.00	43,818.22	N/A	0	0	$0	$0	$0	$0	$0	$0	$0	N/A	0.00	12
HCMPCAXF	1	0.00	46,118.30	N/A	0	0	$0	$0	$0	$0	$0	$0	$0	N/A	0.00	12
HCMPCAXF	2	0.00	3,878.91	N/A	900	0	$22,000	$0	$22,000	$0	$22,000	$6,453	$32,140	N/A	0.00	0
HCMPCAXF	4	0.00	48,829.73	N/A	0	0	$0	$0	$0	$0	$0	$0	$0	N/A	0.00	12
SWBRCAXF	4	0.00	14,832.33	N/A	0	0	$0	$0	$0	$0	$0	$0	$0	N/A	0.00	12

			DLC on Fiber			Total						Total	Total				Total	Grand Total		
Office	DLC B Sgmt $	DLC A Sgmt $	BG $ wireallow	Structure $	Electronics $	DLC $	APC B Sgmt $	A Sgmt $	BG $ wireallow	Structure $	Electronics $	APC $	Feeder Cost	Distr Dist	Distr Base Cost	Distr Structure	Distr Cost	Tot Loop Cost	Density	Households
ETNACAXF	0.00	0.00	0.00	0.00	0.00	0.00	8,830.82	0.00	8,830.82	19,958.57	328,331.10	368,118.58	$368,119	78,082	$1,816,833	$670,411	$2,487,244	$2,843,363	1.68	870
ETNACAXF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	$12,606	2,800	$21,086	$7,661	$28,747	$41,333	483.79	334
FT.JNCAXF	0.00	0.00	0.00	0.00	0.00	0.00	25,869.10	0.00	25,869.10	62,514.27	318,101.34	364,484.70	$364,485	67,740	$1,316,360	$308,712	$1,623,071	$2,017,588	2.81	843
HCMPCAXF	0.00	0.00	0.00	0.00	0.00	0.00	27,223.62	0.00	27,223.62	41,706.44	208,642.30	276,672.20	$276,672	84,880	$1,384,618	$322,893	$1,707,111	$1,882,883	0.71	661
HCMPCAXF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	$32,140	6,847	$100,237	$38,892	$138,129	$171,270	129.37	616
HCMPCAXF	0.00	0.00	0.00	0.00	0.00	0.00	28,827.30	0.00	28,827.30	58,519.43	121,222.33	208,570.06	$208,570	104,790	$791,192	$291,898	$1,083,101	$1,291,671	0.34	323
SWBRCAXF	0.00	0.00	0.00	0.00	0.00	0.00	8,838.83	0.00	8,838.83	13,234.83	218,818.00	240,791.84	$240,792	112,013	$1,837,822	$381,812	$2,018,434	$2,288,228	0.63	584

$10 million

company	clli	census blck grp	Quadrant	ft	"A" Portn Fdr	Dist Distnc	tothh	density-tothh/sqmi	Dist Cu Multplr	Fdr Cu Multplr	Fiber Multplr
SISKIYOU TEL CO	ETNACAXF	[illegible]	2	16,661	0	78,082	870.2164179	1.88	0.388	0.428	2.03
SISKIYOU TEL CO	ETNACAXF	[illegible]	3	1,825	0	2,800	334.1740169	483.79	0.3627	0.3627	1.8263
SISKIYOU TEL CO	FT.JNCAXF	[illegible]	2	43,818	0	67,740	843.8989084	2.81	0.233	0.303	2.03
SISKIYOU TEL CO	HCMPCAXF	[illegible]	1	46,118	0	84,880	661.846139	0.71	0.233	0.302	1.632
SISKIYOU TEL CO	HCMPCAXF	[illegible]	2	3,879	0	6,847	616.882798	129.37	0.388	0.4186	1.8678
SISKIYOU TEL CO	HCMPCAXF	[illegible]	4	48,827	0	104,758	323.2822117	0.34	0.388	0.428	2.03
SISKIYOU TEL CO	SWBRCAXF	[illegible]	4	14,832	0	112,013	583.7818488	0.63	0.233	0.302	1.632

clli	company name	cbg	quadrant	omega	alpha	dist ft	tothh	area sq miles	density tothh/area	Rock Depth	Rock Hrdns	Surf Tex	Wtr Tbl Dpth	bus lines	res lines	lots
ETNACAXF	SISKIYOU TEL CO	[illegible]	2	110.12	26.12	19,646	870	404.99	1.88	37.36294118		GRV-L	6	-	870	724
ETNACAXF	SISKIYOU TEL CO	[illegible]	3	171.42	8.58	1,843	334	0.6	483.79	60		L	2.825	-	334	724
FT.JNCAXF	SISKIYOU TEL CO	[illegible]	2	88.88	0.88	44,134	843	212.8	2.81	36.42857143	SOFT	GR-L	6.821428572	-	843	724
HCMPCAXF	SISKIYOU TEL CO	[illegible]	1	21.78	21.78	48,666	661	571.78	0.71	42.7		GR-SL	6.3875	-	661	724
HCMPCAXF	SISKIYOU TEL CO	[illegible]	2	131.78	41.78	4,932	616	3.98	129.37	60		GRV-S	6	-	616	724
HCMPCAXF	SISKIYOU TEL CO	[illegible]	4	247.88	22.44	82,827	323	888.81	0.34	41.3	HARD	UWB	6.676	-	323	724
SWBRCAXF	SISKIYOU TEL CO	[illegible]	4	307.7	37.7	18,493	584	800.11	0.63	41.3		SL	6.675	-	584	724

Salmon River

No Hamburg
No Oak Knoll
No Somes Bar

7 CBGs in Siskiyou
but Exhibit 32 indicates Siskiyou serves in 13 CBG

Cost Proxy Model
Presentation of Methodology

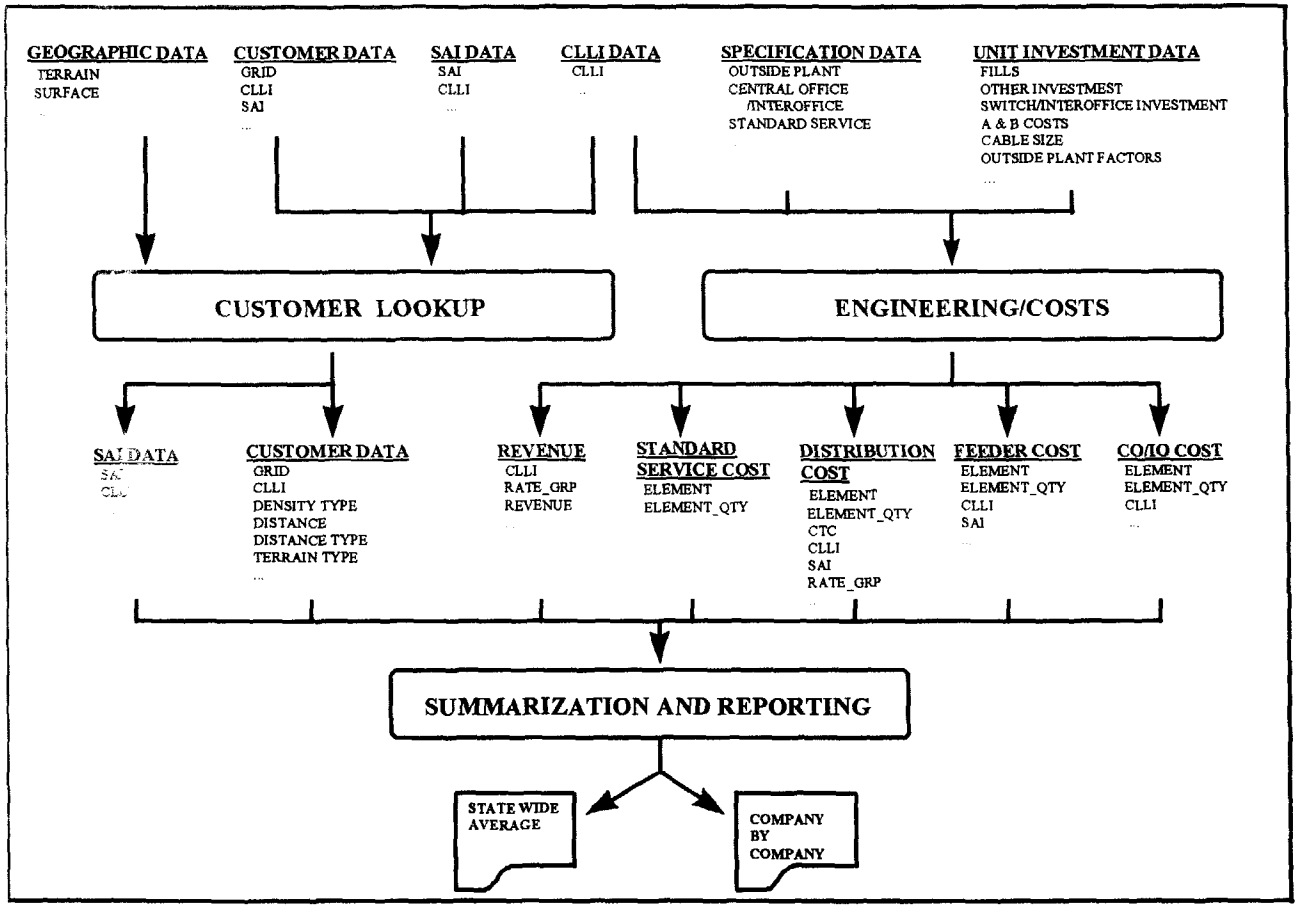
given by

INDETEC International
and
Pacific Bell

May 20-21, 1996

Cost Proxy Model
System Design

Basic System Design



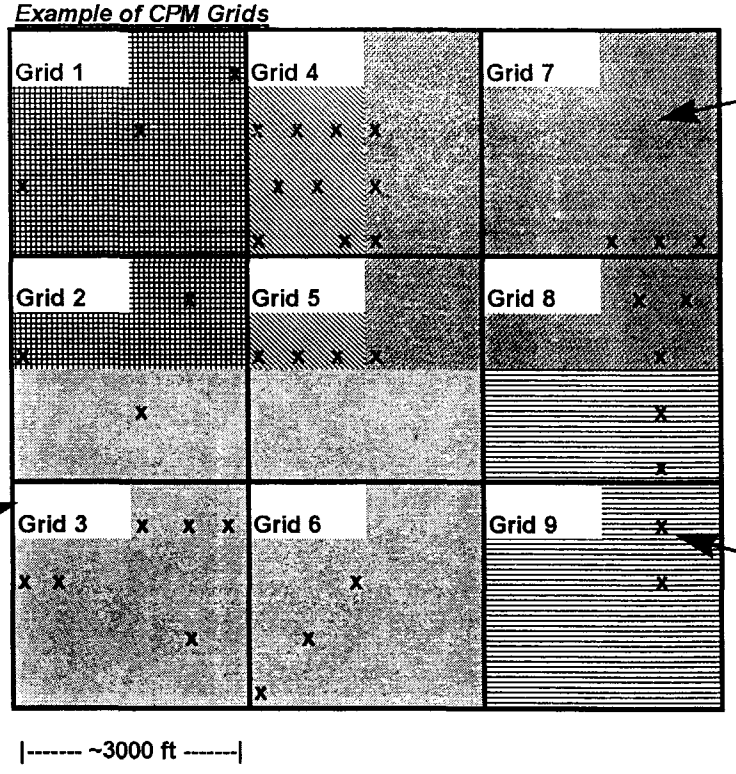
Cost Proxy Model
The "Grid" Dimensions

- Currently, the Following Dimensions are Attached at the "Grid" Level
  - CLLI
  - CBG
  - State
  - Company
  - Political Boundaries
  - Density Type
  - Terrain Type

- These Dimensions are Available but are Not in Use
  - Ethnicity/Race
  - Income
  - Sex, Age
  - Home Ownership

Cost Proxy Model
Customer Engine: The "Grid", Part 1

- ⇨ Current California Model uses Census Block Household data apportioned to "Grids" based on Land Mass
- ⇨ Currently developing improved file using Zip4 data Points as apportioning unit



Census Blocks
- Subsets of CBGs (average of 28)
- There are ~ 350,000 in CA

Grids
- Defined by 1/100 of Degree Lat and Long (- or ~ 3000 ft. * 3000 ft_
- There are ~ 350,000 in CA

Zip 4
- Can be Geocoded to exact Latitude and Longitude
- ~150M in US

Cost Proxy Model
Customer Engine: The "Grid", Part 2

- ⇨ Commercial Data Source Provides Wire Center Boundaries Along With the Lata, NXX, Switch Type, Rate Center, and Company

- ⇨ Using the Boundary, We can Then Assign the "Grids" to a Wire Center